EXPERIMENT STATION
TUSKEGEE NORMAL AND INDUSTRIAL INSTITUTE
TUSKEGEE INSTITUTE, ALABAMA

BULLETIN No. 26, 1915 By G. W. CARVER

A NEW AND PROLIFIC VARIETY OF COTTON

IMPROVED COTTON

LASLIE & PREER
Cotton Factors
Tuskegee, Alabama

Prof. G. W. Carver, March 22, 1915.
Tuskegee Institute, Alabama.

Dear Sir:- We received from you to-day one bale of cotton raised on the Experiment Station.

We wish to state that this bale of cotton is extra good staple, being 1 to 1 1-16 of an inch in length, and shows that it has been nicely handled as regards picking and ginning. If all the cotton in this section was thus harvested and ginned, it would bring on an average of $1.25 more per bale.

We are enclosing check for this cotton at 8 1-8, but will state that, being only one bale in so many of only average staple, we cannot handle it to any better advantage because of this extra staple. Thanking you, we are,

Yours very truly,
LASLIE & PREER

With an average crop year this would mean for Alabama nearly 1 1-2 million dollars, and for Macon County alone over $39,000.

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A NEW AND PROLIFIC VARIETY OF COTTON

I am deeply interested in two of the great movements that are designed and calculated to sweep this grand old State of ours from center to circumference.

The first slogan applies to education, and is captioned "Alabama's Illiteracy; Let's Remove It." The second implies health, wealth, independence, and happiness, and is captioned "Alabama Must Feed Herself."

Were I asked to submit a third I would unhesitatingly add this one; "More Cotton per Acre at Less Cost, and Better Prices." Such a condition is not impossible, and it is the purpose of this little leaflet to tell how it can be done.

History

Sixteen years ago the Experiment Station undertook the production of a type of cotton that would possess the following characteristics:

1. A longer and finer staple.
2. A more prolific variety.
3. A disease resistant variety.
4. A cotton that produces well on light, sandy soils.
5. An early maturing variety that would escape more or less the ravages of the boll weevil.

In all the above matters a marked degree of success has been obtained.

This cotton has the following well-known types carefully bred into it: Sea Island, from whence it gets its long, silken fiber; Russell's Big Boll, from whence it gets its large bolls, and its adaptability to upland conditions of soil and climate; Jackson's Wilt Resisting, from whence it gets its power to resist to a remarkable degree the troublesome diseases known as wilt, black root, etc.; Simpkin's prolific, from whence it gets its great fruiting habit.

How to make large yields from this cotton

This cotton like all other varieties, produces good or bad in proportion to the proper or improper preparation, fertilization, and after-cultivation of the soil.

Preparation of the Soil

In this it is safe to say that fully two-thirds of our farmers fail. They fail, first, because they do not turn (broadcast) their land in the fall, just as soon as the crop is off; second, they do not plow deep enough. Plowing should be from 8 to 10 inches deep.

Fertilization

In addition to a well-prepared seed-bed, the land must be well fertilized if large crops are expected. By "large crops" I mean from 1 to 1 1-2, and in favorable localities, 2 bales per acre. There is an abundance of land in Macon and adjoining counties that can be made to produce two bales of 500 lbs. lint per acre.

Barnyard manure is the very best fertilizer known for cotton, and, on an average, our soils will require from 15 to 20 tons per acre. This should be spread over the land and plowed under. Where the soils do not wash and are not leachy, the manure can

be spread and plowed under in the fall; otherwise spread and plow under in the spring.

We have found, for our light, sandy soils which rust cotton badly, that a commercial mixture approximating the following gives excellent results:

200 lbs. cotton-seed meal per acre
210 " acid phosphate " "
125 " kainit " "

I found that during wet springs it was better to divide the fertilizer and put only half of it down when planting, and the other half just before the plants begin to form squares. This is easily and quickly done with a fertilizer distributor.

Cultivation

There is such a wide difference of opinion in the matter of cultivation that one hesitates to put himself on record. These facts, however, are prominent, and in whatever way they can be secured, will be acceptable.

If the best results are to be had, all weeds and grass must be kept down; the loss of water must be saved by frequent and shallow cultivation; the surface roots should be injured just as little as possible.

Another important point for the farmer to keep in mind is the fact that all plant foods in the soil are rendered non-available or worthless to the plant unless there is sufficient water in the soil to properly dissolve and distribute them. Hence, in the thirsty soils it is doubly necessary that the cultivation be done in such a manner as to save the water, say from 2 to 2 1-2 inches deep.

Cotton is a typical tap-rooted plant, made to go deep into the soil for both water and plant food, but

the many decades of soil skimming, poor seed selection, and bad cultivation, have dwarfed both root and top, and produced a plant that has lost much of its original characteristics. It has been so lowered in vitality that the roots, stem, leaves, and bolls are all subject to a large number of destructive diseases.

Aside from the tap root going deep in the ground of well-prepared soils, it throws out numerous laterals, often four and five feet in length. The largest of which as a rule are just below the surface of the ground; hence the wisdom of shallow cultivation.

Off Grade

The following things cause cotton to bring a lower price per pound than it otherwise would, and the farmer can and should avoid every one of them.

Immature Cotton

Cotton growers divide their pickings into three divisions known as "crops"—viz., the first bolls to open are called the bottom crop; the second, the middle crop; and the third, the top crop. The bottom and middle crops are nearly always the choicest staple. The top crop is the poorest, as it is frequently immature. Such should be kept ginned and sold separately, as it lowers the price of it all when mixed with the bottom and middle crops. Bolls of cotton picked before they are well open and those that do not open before frost, usually contain a large number of unripe fibers.

Foreign Impurities

Another important factor in determining the grade of cotton is, its freedom from foreign impuri-

ties. Such as leaf, boll, husk, stalk, seed, and sand impurities. These can be reduced to the minimum if the proper care is exercised in picking and handling.

Color

This probably affects the price as much as any other one thing. Some local buyers go altogether on color, the highest grade being a creamy white. If cotton can be picked before the rain falls upon it, it will be very choice in color.

Tinges, Stains, Etc.

Cotton that has tufts in it that are off color, such as pink, green, yellow, etc., is called tinged. When the color is very deep and general throughout, it is classed as stained. Both conditions originate practically from the same source; viz., immature bolls, juices from crushed seed water dripping from the leaves of the stalk, frosted cotton, cotton that has been put into large piles and allowed to sweat and mildew. All these materially reduce the price as well as poor seed, bad preparation of the soil, insufficient fertilizers, late planting, poor cultivation, etc.

We hope the letter on the cover will inspire every cotton grower to set about at once to raise the standard of his cotton, in both quantity per acre and quality of fiber, which means greater prosperity for the State, more money for the county, and greater peace and happiness for the individual farmer.